

THAT WHICH IS CLAIMED IS:

*Subj* ~~1. A method of updating information maintained at an intermediary web site on a computer network about items being auctioned at a plurality of remotely located auction sites on the computer network, wherein the information is displayable to users accessing the intermediary web site via the computer network, the method comprising the following steps:~~

5 ~~obtaining auction item data that has changed since a previous time for auctions currently being conducted at the respective auction sites;~~

10 ~~extracting keywords from the obtained auction item data; and~~

15 ~~storing the extracted keywords, wherein each stored keyword is associated with an item currently being auctioned at a respective one of the plurality of remotely located auction sites, and wherein the stored keywords are searchable by users accessing the intermediary web site.~~

2. The method according to Claim 1 wherein the step of obtaining auction item data that has changed since a previous time is performed at predetermined time intervals.

3. The method according to Claim 1 wherein each auction site includes a data engine that is configured to obtain data about each item currently

5 being auctioned at the respective auction site, and  
wherein the intermediary web site includes an agent  
that is configured to communicate with and retrieve  
auction item data from each auction site data engine,  
and wherein the step of obtaining auction item data at  
each of the auction sites that has changed since a  
10 previous time for auctions currently being conducted at  
each respective auction site comprises:

establishing a TCP/IP connection between the  
agent and each respective data engine; and

15 sending an HTTP request from the agent to  
each respective data engine via the TCP/IP connection  
to obtain auction item data that has changed since a  
previous time.

4. The method according to Claim 3 wherein  
the data engine at each auction site comprises a data  
file configured to store cyclic redundancy checking  
(CRC) values for static and dynamic information about  
5 each auction item being auctioned at the respective  
auction site, wherein static information comprises an  
identification of an auction item, wherein dynamic  
information comprises at least one of bid information  
and price information associated with an auction item,  
and wherein the step of obtaining auction item data  
10 that has changed since a previous time comprises the  
following steps performed by each respective data  
engine:

15 determining whether the data file contains a  
CRC value for each item currently being auctioned;

storing CRC values in the data file for each  
item currently being auctioned that does not have a CRC

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value in the data file; and

sending static and dynamic information to the intermediary web site for each item currently being auctioned that does not have a CRC value in the data file.

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5. The method according to Claim 4 wherein the step of obtaining auction item data that has changed since a previous time further comprises the following steps performed by each respective data engine:

generating new CRC values for each item currently being auctioned;

comparing the new CRC values with CRC values stored within the data file for each respective auction item;

10 storing the new CRC values for each item currently being auctioned in the respective data file if the new CRC values differ from the stored CRC values; and

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sending to the intermediary web site current information for each item currently being auctioned.

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6. A method of updating information maintained at an intermediary web site on a computer network about items being auctioned at a plurality of remotely located auction sites on the computer network, wherein the information is displayable to users accessing the intermediary web site via the computer network, wherein each auction site includes a data engine that is configured to obtain data about each item currently being auctioned at the respective

10 auction site, wherein each data engine comprises a data file configured to store cyclic redundancy checking (CRC) values for static and dynamic information about each auction item being auctioned at the respective auction site, wherein static information comprises an 15 identification of an auction item, wherein dynamic information comprises at least one of bid information and price information associated with an auction item, and wherein the intermediary web site includes an agent that is configured to communicate with and retrieve auction item data from each auction site data engine, the method comprising the following steps:

20 sending a request from the agent to a plurality of respective data engines to obtain auction item data that has changed since a previous time for auctions currently being conducted at the respective auction sites;

25 obtaining auction item data that has changed since a previous time for auctions currently being conducted at the respective auction sites, comprising the following steps performed by each respective data engine:

30 determining whether a data file contains a CRC value for each item currently being auctioned;

35 storing CRC values in the data file for each item currently being auctioned that does not have a CRC value in the data file; and

40 sending static and dynamic information to the intermediary web site for each item currently being auctioned that does not have a CRC value in the data file; and

updating the information maintained at the intermediary web site with the static and dynamic information received from each respective data engine.

7. The method according to Claim 6 wherein the step of updating the information maintained at the intermediary web site comprises the following steps:

5 extracting keywords from the received static and dynamic information; and

10 storing the extracted keywords, wherein each stored keyword is associated with an item currently being auctioned at a respective one of the plurality of remotely located auction sites, and wherein the stored keywords are searchable by users accessing the intermediary web site.

8. The method according to Claim 6 wherein the step of sending a request from the agent to each of a plurality of respective data engines is performed at predetermined time intervals.

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9. The method according to Claim 6 wherein the step of obtaining auction item data that has changed since a previous time further comprises the following steps performed by each respective data engine:

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generating new CRC values for each item currently being auctioned;

comparing the new CRC values with CRC values stored within a data file for each respective auction item;

storing the new CRC values for each item

currently being auctioned in the respective data file if the new CRC values differ from the stored CRC values; and

15 sending to the intermediary web site current information for each item currently being auctioned.

10. A method of providing information, via a Web site of an intermediary, about items being auctioned at a plurality of remotely located auction sites on a computer network, wherein the Web site is configured to communicate with each of the plurality of remotely located auction sites via the computer network, and wherein the Web site is configured to communicate with users accessing the Web site via respective Web clients, the method comprising the following steps:

15 receiving a user request at the Web site for information about items currently being auctioned at one or more of the auction sites, wherein the user request comprises at least one of a keyword and an auction item parameter; and

20 responsive to receiving the user request, searching keywords maintained by the Web site for matches with the user request keyword, wherein each keyword maintained by the Web site is associated with at least one item currently being auctioned at a respective one of the plurality of remotely located auction sites; and

25 responsive to locating a keyword that matches a user request keyword, displaying information about an item currently being auctioned at a respective one of the plurality of remotely located auction sites that is

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associated with the located keyword, wherein the displayed information comprises an identification of the auction item, and wherein a portion of the displayed information is selectively linked to the respective auction site such that, upon user activation, a user Web client is redirected to the respective auction site.

11. The method according to Claim 10, wherein the displayed information further comprises at least one of auction time and price information associated with the auction item.

12. The method according to Claim 10, further comprising the step of sending the user updated information about the auction item at one or more future times.

13. The method according to Claim 10, further comprising:

5 performing a search of keywords maintained by the Web site subsequent to the displaying step; and sending the user results from the performed search.

14. A method of providing information, via a Web site of an intermediary, about items being auctioned at a plurality of remotely located auction sites on a computer network, wherein the Web site is 5 configured to communicate with each of the plurality of remotely located auction sites via the computer network, and wherein the Web site is configured to

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communicate with users accessing the Web site via respective Web clients, the method comprising the following steps:

receiving a user request at the Web site for information about items currently being auctioned at one or more of the auction sites, wherein the user request comprises a keyword;

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responsive to receiving the user request, searching keywords maintained by the Web site for matches with the user request keyword, wherein each keyword maintained by the Web site is associated with an item currently being auctioned at a respective one of the plurality of remotely located auction sites;

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responsive to locating a keyword that matches the user request keyword, displaying information about an item currently being auctioned at a respective one of the plurality of remotely located auction sites that is associated with the located keyword, wherein the displayed information comprises at least one of an identification of the auction item, auction time, and price information associated with the auction item, and wherein a portion of the displayed information is selectively linked to the respective auction site such that, upon user activation, the user Web client is redirected to the respective auction site; and

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30 sending the user updated information about the auction item at one or more future times.

15. The method according to Claim 12, wherein the step of sending the user updated information about the auction item at one or more future times comprises sending the user an e-mail

5 message containing the updated information.

16. A method of participating in an auction conducted at one or more remotely located auction sites on a computer network, the method comprising the following steps:

5 sending a user request for information about items currently being auctioned at one or more of the remotely located auction sites to a Web site of an intermediary on the computer network, wherein the user request comprises at least one keyword;

10 responsive to receiving the user request, searching keywords maintained by the Web site for matches with the at least one user request keyword, wherein each keyword maintained by the Web site is associated with an item currently being auctioned at a 15 respective one of the plurality of remotely located auction sites;

20 responsive to locating a keyword that matches the user request keyword, displaying information about an item currently being auctioned at a respective one of the plurality of remotely located auction sites that is associated with the located keyword, wherein the displayed information comprises at least one of an identification of the auction item, auction time, and price information associated with the auction item;

25 sending a user request to place a bid on the auction item to the intermediary Web site; and

30 responsive to receiving the user request to place the bid, placing a bid for the user on the auction item at the respective auction site where the auction item is being auctioned.

17. The method according to Claim 16, further comprising the step of sending the user updated information about the auction item at one or more future times.

18. The method according to Claim 16, further comprising:

5 performing a search of keywords maintained by the Web site subsequent to the displaying step; and sending the user results from the performed search.

19. A method of listing an item for sale in an auction conducted at one of a plurality of remotely located auction sites on a computer network, the method comprising the following steps performed by a Web site 10 of an intermediary:

displaying a list of auctions conducted at one or more of the remotely located auction sites; and sending a request to a selected one of the auction sites to list an item for sale at an auction conducted at the selected auction site in response to receiving a user request.

10 20. The method according to Claim 19, wherein the user request comprises at least one of an identification of the item, a quantity of the item, price information, and auction time information.

21. The method according to Claim 20, further comprising the step of sending the user updated

information about auction status of the item at one or more future times.

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22. The method according to Claim 21, wherein the step of sending the user updated information about auction status of the item at one or more future times comprises sending the user an e-mail message containing the updated information.

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23. An on-line auction system, comprising: a computer network; at least one remotely located auction site in communication with the computer network, wherein each auction site comprises:

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a data engine that is configured to obtain data about each item currently being auctioned at the respective auction site, wherein each data engine comprises a data file configured to store cyclic redundancy checking (CRC) values for static and dynamic information about each auction item being auctioned at the respective auction site, wherein static information comprises an identification of an auction item, wherein dynamic information comprises at least one of bid information and price information associated with an auction item; and means for obtaining auction item data that has changed since a previous time for auctions currently being conducted at the respective auction sites; a Web site of an intermediary in

25 communication with the computer network, wherein the Web site is configured to display selected information about auction items at each of the remotely located auction sites, comprising:

30 an agent that is configured to communicate with and retrieve auction item data from each auction site data engine; and means for sending a request from the agent to each of a plurality of respective data engines to obtain auction item data that has changed since a previous time for auctions currently being conducted at the respective auction sites; and means for updating the information maintained at the intermediary web site with the information received from each respective data engine.

40 24. The on-line auction system according to Claim 23, wherein the means for obtaining auction item data that has changed since a previous time comprises: means for determining whether the data file 5 contains a CRC value for each item currently being auctioned;

10 means for storing CRC values in the data file for each item currently being auctioned that does not have a CRC value in the data file; and

means for sending static and dynamic information to the intermediary web site for each item currently being auctioned that does not have a CRC value in the data file.

25. The on-line auction system according to  
Claim 23, wherein the means for updating the  
information maintained at the intermediary web site  
comprises:

5 means for extracting keywords from the  
received information; and  
means for storing the extracted keywords,  
wherein each stored keyword is associated with an item  
currently being auctioned at a respective one of the  
10 plurality of remotely located auction sites, and  
wherein the stored keywords are searchable by users  
accessing the intermediary web site.

26. The on-line auction system according to  
Claim 23 wherein the means for sending a request from  
the agent to each of a plurality of respective data  
engines comprises means for sending requests at  
5 predetermined time intervals.

27. The on-line auction system according to  
Claim 23 wherein the means for obtaining auction item  
data that has changed since a previous time comprises:

5 means for generating new CRC values for each  
item currently being auctioned;  
means for comparing new CRC values with CRC  
values stored within the data file for each respective  
auction item;  
means for storing the CRC values for each  
10 item currently being auctioned in the respective data  
file if the new CRC values differ from the stored CRC  
values; and  
means for sending to the intermediary web

site current information for each item currently being  
15 auctioned.

28. A data processing system for providing  
information about items being auctioned at a plurality  
of remotely located auction sites on a computer  
network, wherein the data processing system is  
5 configured to communicate with each of the plurality of  
remotely located auction sites via the computer  
network, and wherein the data processing system is  
configured to communicate with users accessing the data  
processing system via respective Web clients,  
comprising:

means for receiving a user request for  
information about items currently being auctioned at  
one or more of the auction sites, wherein the user  
request comprises a keyword;

15 means, responsive to receiving a user  
request, for searching keywords maintained by the data  
processing system for matches with the user request  
keyword, wherein each keyword maintained by the data  
processing system is associated with an item currently  
20 being auctioned at a respective one of the plurality of  
remotely located auction sites; and

means, responsive to locating a keyword that  
matches the user request keyword, for displaying  
information about an item currently being auctioned at  
25 a respective one of the plurality of remotely located  
auction sites that is associated with the located  
keyword, wherein the displayed information comprises an  
identification of the auction item, and wherein a  
portion of the displayed information is selectively

30 linked to the respective auction site such that, upon user activation, a user Web client is redirected to the respective auction site.

29. The data processing system according to Claim 28, wherein the displayed information further comprises at least one of auction time and price information associated with the auction item.

30. The data processing system according to Claim 28, further comprising means for sending the user updated information about the auction item at one or more future times.

31. The data processing system according to Claim 28, further comprising:

means for subsequently performing searches of keywords maintained by the Web site; and

5 means for sending the user results from the subsequently performed searches.

32. A data processing system for providing information about items being auctioned at a plurality of remotely located auction sites on a computer network, wherein the data processing system is configured to communicate with each of the plurality of remotely located auction sites via the computer network, and wherein the data processing system is configured to communicate with users accessing the data processing system via respective Web clients, 5 comprising:

means for receiving a user request at the

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data processing system for information about items currently being auctioned at one or more of the auction sites, wherein the user request comprises a keyword;

15 means, responsive to receiving the user request, for searching keywords maintained by the data processing system for matches with the user request keyword, wherein each keyword maintained by the data processing system is associated with an item currently being auctioned at a respective one of the plurality of 20 remotely located auction sites;

means, responsive to locating a keyword  
25 maintained by the data processing system that matches  
the user request keyword, for displaying information  
about an item currently being auctioned at a respective  
one of the plurality of remotely located auction sites  
that is associated with the located keyword, wherein  
the displayed information comprises at least one of an  
identification of the auction item, auction time, and  
30 price information associated with the auction item, and  
wherein a portion of the displayed information is  
selectably linked to the respective auction site such  
that, upon user activation, a user Web client is  
redirected to the respective auction site; and  
35 means for sending the user updated  
information about the auction item at one or more  
future times.

33. The data processing system according to  
Claim 32, wherein the means for sending the user  
updated information about the auction item at one or  
more future times comprises means for sending the user  
an e-mail message containing the updated information.

34. A data processing system for participating in an auction conducted at one or more remotely located auction sites on a computer network, comprising:

5 means for receiving a user request for information about items currently being auctioned at one or more of the remotely located auction sites, wherein the user request comprises at least one keyword;

10 means for searching keywords maintained by the data processing system for matches with the at least one user request keyword, wherein each keyword maintained by the data processing system is associated with an item currently being auctioned at a respective one of the plurality of remotely located auction sites;

15 means, responsive to locating a keyword that matches the user request keyword, for displaying information about an item currently being auctioned at a respective one of the plurality of remotely located auction sites that is associated with the located keyword, wherein the displayed information comprises at least one of an identification of the auction item, auction time, and price information associated with the auction item;

20 means for receiving a user request to place a bid on the auction item; and

25 means for placing the bid on behalf of the user on the auction item at a respective auction site where the auction item is being auctioned.

35. The data processing system according to

Claim 34, further comprising means for sending the user updated information about the auction item at one or more future times.

36. The data processing system according to Claim 34, further comprising:

means for subsequently performing searches of keywords maintained by the Web site; and

5 means for sending the user results from the subsequently performed searches.

37. A data processing system for listing an item for sale in an auction conducted at one of a plurality of remotely located auction sites on a computer network, comprising:

5 means for displaying a list of auctions conducted at one or more of the remotely located auction sites;

means for receiving a user request to list an item for sale in a selected one of the displayed list of auctions; and

10 means for listing the item for sale in the selected auction at a respective auction site.

38. The data processing system according to Claim 37, wherein the user request comprises at least one of an identification of the item, a quantity of the item, price information, and auction time information.

39. The data processing system according to Claim 37, further comprising means for sending the user updated information about auction status of the item at

one or more future times.

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40. The data processing system according to Claim 39, wherein the means for sending the user updated information about auction status of the item at one or more future times comprises means for sending the user an e-mail message containing the updated information.

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41. A computer program product that provides information about items being auctioned at a plurality of remotely located auction sites on a computer network, wherein the computer program product is configured to communicate with each of the plurality of remotely located auction sites via the computer network, wherein the computer program product is configured to communicate with users accessing the data processing system via respective Web clients, and wherein the computer program product comprises a computer usable storage medium having computer readable program code embodied in the medium, the computer readable program code comprising:

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computer readable program code that receives a user request for information about items currently being auctioned at one or more of the auction sites, wherein the user request comprises a keyword;

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computer readable program code that, in response to receiving a user request, searches stored keywords for matches with the user request keyword, wherein each stored keyword is associated with an item currently being auctioned at a respective one of the plurality of remotely located auction sites; and

computer readable program code that, in  
25 response to locating a keyword that matches the user  
request keyword, displays information about an item  
currently being auctioned at a respective one of the  
plurality of remotely located auction sites that is  
associated with the located keyword, wherein the  
30 displayed information comprises an identification of  
the auction item, and wherein a portion of the  
displayed information is selectively linked to the  
respective auction site such that, upon user  
activation, a user Web client is redirected to the  
35 respective auction site.

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42. The computer program product according  
to Claim 41, wherein the displayed information further  
comprises at least one of auction time and price  
information associated with the auction item.

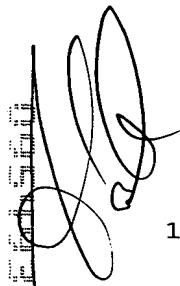
43. The computer program product according  
to Claim 41, further comprising computer readable  
program code that sends the user updated information  
about the auction item at one or more future times.

44. The computer program product according  
to Claim 41, further comprising:

computer readable program code that  
subsequently performs searches of keywords maintained  
5 by the Web site; and

computer readable program code that sends the  
user results from the subsequently performed searches.

45. A computer program product that provides

information about items being auctioned at a plurality of remotely located auction sites on a computer network, wherein the computer program product is  
5 configured to communicate with each of the plurality of remotely located auction sites via the computer network, wherein the computer program product is configured to communicate with users accessing the data processing system via respective Web clients, and  
10 wherein the computer program product comprises a computer usable storage medium having computer readable program code embodied in the medium, the computer readable program code comprising:  


15 computer readable program code that receives a user request at the data processing system for information about items currently being auctioned at one or more of the auction sites, wherein the user request comprises a keyword;

20 computer readable program code that, in response to receiving the user request, searches stored keywords for matches with the user request keyword, wherein each stored keyword is associated with an item currently being auctioned at a respective one of the plurality of remotely located auction sites;

25 computer readable program code that, in response to locating a keyword that matches the user request keyword, displays information about an item currently being auctioned at a respective one of the plurality of remotely located auction sites that is associated with the located keyword, wherein the displayed information comprises at least one of an identification of the auction item, auction time, and price information associated with the auction item, and  
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wherein a portion of the displayed information is  
35 selectively linked to the respective auction site such  
that, upon user activation, a user Web client is  
redirected to the respective auction site; and

computer readable program code that sends the  
user updated information about the auction item at one  
40 or more future times.

46. The computer program product according  
to Claim 45, further comprising:

computer readable program code that  
subsequently performs searches of keywords maintained  
5 by the Web site; and

computer readable program code that sends the  
user results from the subsequently performed searches.

47. A computer program product that  
facilitates user participation in auctions conducted at  
remote, on-line auction sites on a computer network,  
wherein the computer program product comprises a  
5 computer usable storage medium having computer readable  
program code embodied in the medium, the computer  
readable program code comprising:

computer readable program code that receives  
a user request for information about items currently  
10 being auctioned at one or more of the remote auction  
sites, wherein the user request comprises at least one  
keyword;

computer readable program code that searches  
stored keywords for matches with the at least one user  
15 request keyword, wherein each stored keyword is  
associated with an item currently being auctioned at a

respective one of the remote auction sites;

computer readable program code that, in  
20 response to locating a keyword that matches the user  
request keyword, displays information about an item  
currently being auctioned at a respective one of the  
plurality of remotely located auction sites that is  
associated with the located keyword, wherein the  
displayed information comprises at least one of an  
identification of the auction item, auction time, and  
25 price information associated with the auction item;

computer readable program code that receives  
a user request to place a bid on the auction item; and

30 computer readable program code that places  
the bid on behalf of the user on the auction item at a  
respective auction site where the auction item is being  
auctioned.

48. The computer program product according  
to Claim 47, further comprising computer readable  
program code that sends the user updated information  
about the auction item at one or more future times.

49. The computer program product according  
to Claim 47, further comprising:

computer readable program code that  
subsequently performs searches of keywords maintained  
5 by the Web site; and

computer readable program code that sends the  
user results from the subsequently performed searches.

50. A computer program product that lists an  
item for sale in an auction conducted at one of a

5 plurality of remotely located auction sites on a computer network, wherein the computer program product comprises a computer usable storage medium having computer readable program code embodied in the medium, the computer readable program code comprising:

computer readable program code that displays a list of auctions conducted at one or more of the remotely located auction sites;

computer readable program code that receives a user request to list an item for sale in a selected one of the displayed list of auctions; and

computer readable program code that lists the item for sale in the selected auction at a respective auction site.

51. The computer program product according to Claim 50, wherein the user request comprises at least one of an identification of the item, a quantity of the item, price information, and auction time information.

52. The computer program product according to Claim 50, further comprising computer readable program code that sends the user updated information about auction status of the item at one or more future times.

53. The computer program product according to Claim 50, wherein the computer readable program code that sends the user updated information about auction status of the item at one or more future times comprises computer readable program code that sends the

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user an e-mail message containing the updated  
information.